modulation of the AMPK/SIRT1 and TLR4/NF-κB signaling pathways. Moreover, combined therapy of CB2R agonist and AD-MSCs has a synergetic effect on cardiac repair and functional improvement after infarction.

GW26-e2179

Genetic Variation in INSIG2 was associated with Coronary Artery Disease in Uygur population in Xinjiang, China

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OBJECTIVES Dyslipidemia is a major and independent risk factor for the development of Coronary artery disease (CAD). The protein which is encoded by insulin induced gene2 (INSIG2) plays an important rules in the mediation of the feedback control of cholesterol synthesis, lipogenesis and glucose homeostasis. However, the relationship between INSIG2 genetic polymorphisms and CAD among diverse ethnicities remains unclear. The aim of the present study was to assess the association between the human INSIG2 gene and CAD in Han and Uygur population of Xinjiang, China.

METHODS A total of 681 CAD patients (334 Han, 347 Uygur) and 770 controls (346 Han, 424 Uygur) were selected for the present Case-control study. Three tagging SNPs (rs17047757, rs2161829 and rs12613329) of INSIG2 gene were genotyped using TaqMan® assays from Applied Biosystems following the manufacturer's suggestions and analyzed in an ABI 7900HT Fast Real-Time PCR System.

RESULTS In the Uygur population, for total, men and women the rs17047757 was associated with CAD by analyses of a recessive model (all, $p < 0.001$) and additive model (all, $p < 0.001$),and the difference remained significant after multivariate adjustment in a recessive model ($p < 0.001$, $p = 0.033$ and $p = 0.002$, respectively) and additive model ($p < 0.001$, $p < 0.001$ and $p = 0.035$, respectively). this relationship was also observed in rs2161829 for women by analyses of a recessive model (all, $p < 0.001$) and additive model (all, $p = 0.033$), and the difference remained significant after multivariate adjustment in a recessive model ($p < 0.001$, respectively). However, this relationship was not observed in this three tagging SNPs before and after multivariate adjustment in Han population.

CONCLUSIONS Our results indicated that both rs17047757 and rs2161829 in the INSIG2 gene was associated with CAD in Uygur population in Xinjiang, China.

GW26-e2408

Left renal sympathetic stimulation and ablation affect ventricular arrhythmia by modulating left stellate ganglion in a cesium-induced long QT canine model

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OBJECTIVES Our previous study has shown that left renal sympathetic stimulation (LRS) may facilitate ischemic ventricular arrhythmia (VA) by increasing neural activity of left stellate ganglion (LSG). Furthermore, studies have shown that renal sympathetic ablation (LRA) may be anti-arrhythmia. Therefore, we hypothesized that renal sympathetic intervention may affect VA by modulating LSG activity in a cesium induced long QT canine model.

METHODS Twenty-four dogs were randomly divided into three groups, group 1 (n=8,LRS), group 2 (n=8, LRA), group 3 (n=8, LRS followed LSG ablation). Ventricular effective refractory period (ERP), heart rate variability (HRV), serum norepinephrine, BP elevation in response to LSG stimulation and LSG activity were measured before and after autonomic intervention. Following, dose injection of cesium was conducted and then early afterdepolarization amplitude, VA prevalence and tachycardia threshold as measured by dose of CsCl were compared among these groups.

RESULTS In group 1, 3-hour LRS significantly decreased ventricular ERP at all sites and HRV, increased serum norepinephrine and LSG neural activity, and augmented BP elevation in response to LSG stimulation as compared to group baseline. In group 2, however, LRA resulted in a reverse result. Furthermore, no significant change was shown in ventricular ERP, HRV, serum norepinephrine, BP elevation in response to LSG stimulation or LSG neural activity in group 3. As compared to group 1, the early afterdepolarization amplitude and VA prevalence were significantly reduced, and the tachycardia threshold was significantly higher in group 2 and group 3.

CONCLUSIONS LRS and LRA might facilitate and prevent VA, respectively, by modulating LSG neural activity in cesium-induced long QT canine model.

GW26-e2420

Danhong Injection Prevents Nitroglycerin-induced Tolerance in Rat

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OBJECTIVES Danhong Injection (DHI) is a traditional Chinese medicine consisted by two herbal medicines, Radix et Rhizoma Salviae Miltiorrhizae and Rhizoma Flos Carthami, which is used in clinic as a remedy for cardiovascular diseases. The early studies indicated that DHI has protective effect on endothelial cells. This study aimed to investigate the potential effects of DHI on nitroglycerin-induced tolerance in rats.

METHODS Nitroglycerin-induced tolerance was induced by pretreatment with nitroglycein (50 mg/kg) once a day for three days on Wistar rats. DHI was co-treated in this period. In addition, the maximal relaxation response curve was drawn and malondialdehyde (MDA) level, nitric oxide synthase (NOS) activity and cyclic guanosine monophosphate (cGMP) level were measured. In vitro, the tolerance was induced by exposure the isolated thoracic aorta obtained from rats to nitroglycerin (10^{-4} M) for 60 min with pretreated of DHI. In addition, nitric oxide synthase inhibitor (L-NAME), ornithine cyclase inhibitor (ODQ) and cyclooxygenase inhibitors (Indo) were used to study the mechanism.

RESULTS DHI could significantly reduce the MDA content ($P < 0.05$), increase NO and cGMP ($P < 0.05$) in comparison with nitroglycerin-induced tolerance. Pre-exposure of aortic rings to nitroglycerin significantly reduced the relaxation to nitroglycerin ($P < 0.05$) in comparison with controls. Treatment with DHI could increase relaxation's response compare with nitroglycerin-induced tolerant aortic rings ($P < 0.05$).

CONCLUSIONS DHI significantly attenuates nitroglycerin-induced tolerance in vivo and in vitro. The mechanism is at least partly based on endothelium protection and anti-oxidant.

GW26-e4536

The study of asiatic acid effects on isoprenaline induced cardiac hypertrophy

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OBJECTIVES To study whether asiatic acid (AA) attenuate cardiac hypertrophy through the mitogen-activated protein kinase (MAPK) and phosphoinositide 3-kinase (PI3K) signaling.

METHODS Cardiac hypertrophy in mice was induced by subcutaneous administration of isoproterenol. 30 mice were divided into three groups (10 mice per group): Sham (saline), ISO (saline) and ISO+AA. The mice were subcutaneously given a dose of 50mg/kg of AA 2 times a day for two weeks, meanwhile mice in the Sham and ISO group received the same volume of normal saline. The heart weight (HW), tibia length (TL) and body weight (BW) were recorded and then calculated the ratios of HW/BW and HW/TL. Sections of heart were stained with hematoxylin and eosin for histopathology or picrosirius red for collagen deposition. The cross-sectional areas (CSA) of the myocytes was also counted. The signaling pathway involved in the cardiac hypertrophy was also detected by western blot.

RESULTS Compared to the ISO group, the HW/BW, HW/TL, CSA were obviously reduced in the ISO+AA group. In addition, the parameters of cardiac fibrosis were obviously improved. Meanwhile, the expressions of phospho-Akt, phospho-Gsk3β, phospho-Erk, phospho-P38 were markedly reduced.

CONCLUSIONS Our data suggest that AA can attenuate cardiac hypertrophy through blocking the MAPK and PI3Ksignaling.

GW26-e4771

Protective and antiapoptotic effects of luteolin on oxidative injury in H9C2 cardiomyocytes

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OBJECTIVES Luteolin, a falconoid compound in many types of plants, plays important cardioprotective roles in cardiovascular